Eltako S2U12DDX-UC

Eltako S2U12DDX-UC Programmable Clock User Manual

Model: S2U12DDX-UC | Brand: Eltako

1. SAFETY INFORMATION

WARNING: Electrotechnical work must be performed exclusively by specialized electricians or under their direct supervision and guidance. Improper installation or handling can lead to serious injury or damage.

Always disconnect power before installation, maintenance, or any work on the device. Ensure all local and national electrical codes are followed.

2. PRODUCT OVERVIEW

The Eltako S2U12DDX-UC is a 2-channel programmable clock designed for DIN rail mounting. It features two potential-free contacts (1+1) rated at 16 A/250 V AC. This device supports LED lamps up to 600 W and incandescent bulbs up to 2000 W. It includes an Astro function for automatic switching based on sunrise/sunset, an illuminated display, and a power reserve of approximately 7 days without battery.

Thanks to patented Eltako-Duplex (DX) technology, the normally potential-free contacts can switch 230 V AC 50 Hz, significantly reducing wear. This is achieved by connecting the N conductor to terminal (N) and L to 1 (L) and/or 3 (L), resulting in an additional standby loss of only 0.1 W. The use of bistable relays eliminates coil power loss and heating when switched on.

Up to 60 memory locations are freely assignable across the channels. The device includes automatic date and summer/winter time changes.

Key Features:

- **Installation:** DIN rail mounting
- **Number of Channels:** 2
- **Supply Voltage:** 8-230 V AC/DC
- **Power Reserve:** Approximately 480 hours (7 days)
- **Contacts:** 1+1 potential-free contacts, 16 A/250 V AC
- **Load Capacity:** 230 V LED lamps up to 600 W, incandescent bulbs up to 2000 W
- **Functions:** Astro function, date, automatic summer/winter time change, centralized control, random mode
- **Memory:** Up to 60 freely assignable memory locations
- **Display:** Illuminated screen

Figure 1: Eltako S2U12DDX-UC Programmable Clock. This image shows the compact design of the device, suitable for DIN rail installation, with its display and control buttons visible on the front panel.

3. SETUP

3.1. Installation

The Eltako S2U12DDX-UC is designed for DIN EN 60715 TH35 support rail mounting. It occupies 1 division unit (18 mm wide, 58 mm deep).

1. Ensure power is disconnected at the main circuit breaker before installation.
2. Mount the device onto a standard DIN rail.
3. Connect the N conductor to the (N) terminal.
4. Connect the L conductor to 1 (L) and/or 3 (L) for the respective channels.
5. For centralized control, connect the control input (+A1) for central ON or OFF with priority. The supply and control voltage for central control is 8 to 230 V UC.
6. Verify all connections are secure and correct before restoring power.

3.2. Initial Configuration - Language Setting

After applying power for the first time, the language selection menu will appear.

1. Within 10 seconds of applying power, use the **SET** button to select the desired language (D=German, GB=English, F=French, IT=Italian, ES=Spanish).
2. Confirm your selection with the **MODE** button.
3. The display will then show the normal view: weekday, time, day, and month.

Note on Speed: Parameters increase rapidly when the **SET** button is pressed and held. Release and press again for longer to change direction.

4. OPERATING INSTRUCTIONS

4.1. Setting the Time

1. Press **MODE**.
2. In the PRG (program) menu, use **SET** to find the UHR (time) function.
3. Select UHR with **MODE**.
4. For 'S' (hours), use **SET** to adjust the hour and confirm with **MODE**.
5. Proceed similarly for 'M' (minutes).

4.2. Setting the Date

1. Press **MODE**.
2. Use **SET** to find the DAT (date) function.
3. Select DAT with **MODE**.
4. For 'J' (year), use **SET** to choose the year and confirm with **MODE**.
5. Proceed similarly for 'M' (month) and 'T' (day).
6. Finally, 'MO' (weekday) will flash. Adjust with **SET** and confirm with **MODE**.

4.3. Setting the Location (for Astro Function)

A list of German cities can be found in the full user manual for location settings.

1. Press **MODE**.
2. Use **SET** to find the POS (position) function.
3. Select POS with **MODE**.
4. For 'BRT' (latitude), use **SET** to choose the latitude and confirm with **MODE**.
5. Similarly, select longitude for 'LAE' and confirm with **MODE**.
6. Now, for 'GMT', select the time zone and confirm with **MODE**.
7. Optionally, for both channels, a time shift of up to ±2 hours can be entered for WSW (winter solstice) and SSW (summer solstice).

4.4. Manual ON or OFF Switching with Priority

1. Press **MODE**.
2. In the PRG menu, use **SET** to find the INT (interrupt) function.
3. Select INT with **MODE**.
4. For 'KNL' (channel), use **SET** to select channel 1 or 2 and confirm with **MODE**.
5. You can now switch between AUT (automatic), ON, or OFF.
6. After confirming with **MODE**, the selected channel's switching position will be applied.
7. To allow the switching state to change automatically when a time program is active, select AUT.

8. If **MODE** is held for more than 2 seconds during any confirmation, the change is saved, and the normal display appears.

4.5. Summer/Winter Time Change

1. Press **MODE**.

2. Use **SET** to find the SWZ (summer/winter time) function.

3. Select SWZ with **MODE**.

4. Switch between ON and OFF with **SET** and confirm with **MODE**. If ON is selected, the change occurs automatically.

4.6. Centralized Control ON or OFF with Priority (in Automatic Mode)

1. Press **MODE**.

2. Use **SET** to find the ZEA (central control) function.

3. Select ZEA with **MODE**.

4. You can now switch between ZE (central ON) and ZA (central OFF) with **SET** and confirm with **MODE**.

4.7. Activating/Deactivating Random Mode

1. Press **MODE**.

2. Use **SET** to find the ZUF (random) function.

3. Select ZUF with **MODE**.

4. Set to ON (ZUF+) or OFF (ZUF) with **SET** and confirm with **MODE**.

5. When random mode is active, all switching points for all channels are randomly shifted by up to 15 minutes (earlier ON times, later OFF times).

4.8. Entering Timer Programs

Detailed instructions for entering timer programs are provided in the comprehensive user manual. Each memory location can be used with the Astro function (automatic switching after sunrise or sunset), ON/OFF times, or a pulse switching time (triggers a 2-second pulse). The Astro ON/OFF time can be shifted by ±2 hours. Additionally, a time shift of up to ±2 hours can be entered for solstices.

4.9. Activating/Deactivating Key Lock

1. **To Activate:** Briefly press **MODE** and **SET** simultaneously. Lock with **SET** for 'LCK'. This is indicated by an arrow next to the lock icon.

2. **To Deactivate:** Press **MODE** and **SET** simultaneously for 2 seconds. Unlock with **SET** for 'UNL'.

5. MAINTENANCE

The Eltako S2U12DDX-UC programmable clock is designed for long-term, maintenance-free operation. No specific user maintenance is required. For cleaning, use a dry, soft cloth. Do not use abrasive cleaners or solvents.

6. TROUBLESHOOTING

If the device does not function as expected, review the programming steps in Section 4. Ensure all connections are secure and power supply is stable.

- **Display not illuminated:** Check power supply. Press MODE or SET to activate backlight.
- **Incorrect switching times:** Verify time, date, and location settings. Check individual program entries.
- **Keypad unresponsive:** Check if key lock is active (Section 4.9).
- **General malfunction:** Disconnect power for a few minutes, then reconnect. If issues persist, contact Eltako customer support.

7. SPECIFICATIONS

Feature	Specification
Manufacturer	Eltako
Model Number	S2U12DDX-UC
Color	Blue
Material	Plastic
Voltage	230 Volts
Supply Voltage (Control)	8-230 V UC (AC/DC)
Number of Items	1
Batteries Included	No
Batteries Required	No
Power Reserve	Approx. 7 days (480 hours)
Spare Parts Availability	1 Year
Installation	DIN rail (1 division unit, 18mm wide, 58mm deep)
Number of Channels	2

8. WARRANTY AND SUPPORT

For warranty information and technical support, please contact Eltako directly or refer to their official website. Details regarding spare parts availability are typically provided for 1 year from the date of purchase.